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AGRICULTURAL ECONOMICS RESEARCH ATTEMPTS AND ACHIEVEMENTS* A CRITICAL REVIEW OF RESEARCH ACTIVITIES OF THE INDIAN SOCIETY OF AGRICULTURAL ECONOMICS, 1942-62

The Indian Society of Agricultural Economics was started in 1939. The first attempt to undertake research was made in 1942. The list of research studies numbering 20 (or nearly one per year) appended at the end indicates the nature and extent of its research activities spread over two decades. Research activities of the Society can be divided into three categories : (*i*) research projects directly undertaken by the Society, (*ii*) technical and financial aid to research undertaken by others, and (*iii*) encouragement of research through holding special seminar meetings, inviting research articles for the Indian Journal of Agricultural Economics and inviting research papers for annual conferences.

Though these research activities run concurrently they were initially confined to the publication of the Journal; field researches were taken up later. Seminar meetings have been recently started though, this activity too is now six years old. Conferences are regularly held now for 22 years. Whereas the Journal, Conferences, and Seminars provide useful vehicles of agricultural economics research for its promotion and dissemination, through field research the Society has made its own contribution and developed a pattern. Research activity of two decades has its own lessons. This paper attempts to discover these lessons and evaluate contribution of these two-decade long research activities. Emphasis is mainly on pattern of themes and methodological and organizational problems.

FIELD RESEARCH

During the last two decades, the Society carried out 12 researches directly under its administration and aided other eight researches. These researches can be classified into three categories : (*i*) village studies, (*ii*) area studies, and (*iii*) problem studies. Chronologically village studies were started earlier, area studies followed thereafter. The problem studies were added recently, especially after economic planning was taken up in the country. The Research Programmes Committee of the Planning Commission sponsored and aided specialized researches in the field of social sciences.

VILLAGE STUDIES

Objectives

The chronological order of the three types of researches partly reflects the evolution of the research interest and was partly influenced by the type of resources available. In the early forties, when the Society organized its first field research,

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* Prepared by Dr. C. H. Shah, Hon. Jt. Secretary, Indian Society of Agricultural Economics and Shri T. R. Sundaram, Junior Research Officer of the Society. However, the authors' own the responsibility for the views expressed and for errors, if any. This is a revised version of the paper which was submitted for the Conference on Agro-Economic Research convened by the Directorate of Economics and Statistics, Ministry of Food & Agriculture, Government of India in October, 1961 at New Delhi. The Society acknowledges the gratitude of the organizers of the Conference for permitting publication of the paper ahead of the printing of the entire proceedings.

agricultural economics was still in its initial stages in India. At that stage even the basic knowledge about the economic structure of the rural society was incomplete and unorganized. One of the major objectives of the village studies undertaken by the Society was to fill up this major lacuna in the knowledge about the country's rural economy and also to study the general socio-economic characteristics of the rural communities. The Society had a special interest in the study of the social aspects and their relationship with the economic structure and progress of the rural society. 'Bhuvel : Socio-Economic Survey of a Village', the title of the study itself is indicative of the special interest of the Society.

The emphasis on the social structure and its relationship with the economic structure of rural society in the studies done by the Society is also brought out by the study of Bhadkad village. This is a resurvey, the original survey was made some forty years ago in 1915 by the ex-President of the Society. While the original survey was confined to the study of only economic characteristics of the village, in the re-survey a study of social aspects was specially added.

Another important objective of the village studies was to observe changes, if any, in the rural community over a period. The study of Bhadkad was designed with this view. The Society gave financial assistance to Shri Diskalkar, the author of the re-survey of Pimple Saudagar, mainly to serve this purpose.[1] The original survey of this village was done by Dr. Harold H. Mann during 1913-16 —about 4 decades ago. This period of 40 years is packed with important economic events, two major wars, the major economic depression, vital changes of the Government policy toward agriculture, growth of co-operative activities, etc., and lastly, the increasing burden of population accompanied by decline of the non-farm activities in the villages. It was expected that the two re-surveys would reflect the impact of these economic events in the country. Particularly, it was desired to study how the structure of the rural community responded and adjusted itself to these events.

Besides these major objectives, there were two other objectives, important for research workers and policy-makers. They are illustrated by the statement of objectives given by the Bhuvel study : "(*i*) to evolve a standard form of enquiry, both with regard to items and methods—which would be within the reach and competence of trained village officials, (*ii*) to study, as far as possible, every aspect of 'people's' life, social and economic, and seek relationship, and (*iii*) to explore the scope and method of state-cum-voluntary rural reconstruction scheme." The objective (*i*) is of interest to research worker, which in fact, reveals that at one stage it was believed that fuller knowledge of the structure will be obtained by organizing series of village studies, and the cost of studies will be reduced if the procedure is fairly standardised.[2] The objective (*iii*) pertains to policy making and we shall later see in the problem studies, that the administration of the rural society came to be one of the major fields of interest.

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2. It should be accepted that between then and now there are several important changes in the rural economy which have changed completely the context and perspective of village studies making an effort at such standard almost obsolete. Nevertheless its historical importance still remains.

1. The help was given for publishing the results of the resurvey.

Methodological Observations

All the three village studies are mainly of 'census' type. Attempt was made to cover almost all the families in the villages, at least in so far as the main items of information were concerned. 'Bhuvel' survey studied all the 208 families in the village for general information regarding the structure. The medical survey (which is a special feature of this survey) was organized for 803 persons, about 80 per cent of the total population. Ninety-six families (46 per cent of the total) were intensively studied to understand the change in their economic status over a period of time—nearly a generation. Their selection, to 'represent' the village was 'subjective' and was influenced almost entirely by the willingness of the respondent. In 'Pimple Saudagar' the author states, for example, "For the purpose of selecting families, the National Register of Population was referred to and when the head of the families declined to give the necessary information, or it was not available by other means, the next family in the serial number was taken up for the study." (p. 108). Once again Bhuvel study states, "We have taken into account the figures relating only to those who willingly supplied the necessary information" (relating to economic conditions). The subjective element entered in this further, as the report says, "We also took care to see that each caste or class was represented in the inquiry only to the extent of its proportion to the total number of households in the village" (p. 68).

In Bhadkad, however, according to the report, a complete census was taken for both the surveys. However, the details show that out of 356 families income data could be obtained for only 321 families for the first survey. The inference would be that the omission was mainly due to non-response and non-availability of data. However, for the second survey complete information could be obtained for all 345 families.

Contents and Contributions

The topics covered by all the three village studies were in essence the same and followed the common objective to provide a broad view of the socio-economic structure. These studies dealt with occupational distribution, distribution of land among cultivators, problems of tenancy and agricultural labour, problems of non-farm activities such as trades and industries, standard of living through income and expenditure, the asset and liability position and investments and borrowings among economic aspects, and, education, health, social customs, culture and religion among social aspects.

The major contribution of Bhuvel was to provide an idea of the economic or income structure. Families were grouped into three classes A, B, C. Class A comprised of families who were well off, *i.e.*, who did not incur debt for their maintenance; under class B came families who had to struggle hard to live above want and occasionally had to borrow to make both ends meet; and class C consisted of the rest of the families who had to resort frequently to borrowing and were always in debt. The class A families constituted only 17 per cent of the total, class B families 37 per cent and class C 46 per cent. This picture obtained in 1946 and in a village with relatively better literary standard, better health standard and relatively better economic structure. One more conclusion of

general interest was that despite wide variations in income, the level of living did not vary widely between different classes.

Bhadkad resurvey, giving a comparison of conditions in the same village over 40 years revealed increased fragmentation consequent upon the growing pressure of population on land. Nevertheless, this was compensated to an extent by improved yields per acre which resulted from the expansion of irrigation and increased use of manure. On the whole, between 1915-55 families with excess of income over expenditure increased. A perceptible improvement was noted in the standard of living between the two periods. The debt position too changed for the better. On social side, the rigidities of customs regarding marriage and dining had loosened, but not much.

Shri Diskalkar's study of Pimple Saudagar, on the other hand, revealed deterioration of agriculture, during the period of 40 years. This was ascribed to rise of part-time agriculture consequent on increased opportunity of non-farm employment. The village Pimple Saudagar is in the urban vicinity. Whereas Bhuvel and Bhadkad belong to the rich Charotar tract of Gujarat, Pimple Saudagar is located in the transition tract between heavy and light rainfall in Maharashtra, near Poona.

AREA STUDIES

Three major studies belong to this group: (1) Rural Problems in Madras, (2) Rural Baroda, and (3) Economic and Social Survey of the Mehsana District. They conform to the pattern laid out by the League of Nations Studies for rural life in European countries carried out in 1937. All the three studies drew information from the official records. Their major objective was similar to the village studies, *viz.*, to depict the socio-economic structure. In addition, area studies attempted to assess the potentiality for development and problems of planning for the better use of available resources. Hence, besides the study of tenures, land distribution and farm production pattern, they traced the history of the reform measures regarding land, credit and production, co-operation, marketing and Panchayats. They also attempted the study of measures relating to education, health and sanitation, of achievements regarding industrial expansion if any, and of problems of administration.

The major conclusions emerging from these studies were: (i) Increased cohesion among villages required better integration of administration of 'area' (*i.e.*, a group of villages) with a view to planning their development. (ii) The dynamic forces made a heavy impact on the rural structure which was slow in adjusting itself to it. The adjustments should be continuously under study. For the study of these problems and their solution efficient and development-oriented administration is necessary. (iii) There should be proper planning, co-ordination and continuity in administration. For this purpose, it was essential that there should be direct participation by the people at various stages.

PROBLEM STUDIES

Two major fields have interested the Society most for the study of the specific problems of the rural life; they are: (i) co-operation and (ii) administration.

Out of nearly 14 problem studies, about six directly belong to these two fields and three more are indirectly concerned with them. Of the remaining, three studies related to land problems and two to the study of famine and rainfall.

(i) *Co-operation*

In the field of co-operation, the Society has carried out five researches which accounted for the major share in the group of 'problem studies'. This was mainly due to the fact that the ex-President, Shri Manilal B. Nanavati, himself an ardent co-operator, had a continuing and deep interest in the problems of co-operation. The results of Bhuvel and Bhadkad revealed the strength and weakness of co-operation which indicated a need for further investigation.

In 1937, the Reserve Bank of India had studied the working of the Co-operative Banking Union in the Kodinar Taluka, a unique institution both in organization and achievement. In fact, its activities nearly saturated the Kodinar taluka with co-operation. This taluka therefore provided the laboratory for the study of the problem of co-operation. The first problem study, 'Co-operation in Kodinar' undertaken by the Society was concerned with the study of co-operation in this region. Three more studies carried out in the same region were (i) Report on the Enquiries into Capital Formation and into Indebtedness of Persons engaged in Agriculture, (ii) Problems of Small Farmers, and (iii) Conditions of Economic Progress of Farmers. All of them in some way or the other related to co-operation. The study on 'Co-operation in Karjan' examined problems of co-operative societies in a region in which co-operation was extensively practised but its outstanding feature was co-operative processing.

The study 'Co-operative Farming in Gujarat' also belongs to this field. The Society provided technical aid for this study. The study of 'The Estate Farming' was aided technically and financially and belongs to this category. The study relates to the problems of large-scale farms.

Methodology

Most of these studies adopted objective standards for selection of the sample units for the study. In the case of the study 'Co-operation in Kodinar', first in the series, a random sample of 15 members per society was selected. All the 44 societies were included in the study. For the study of 'Problems of Small Farmers' two-stage clustered sampling was adopted. At the first stage, the taluka was divided into 4 homogeneous geographic regions and from each five villages were randomly selected. Families in each village were stratified according to whether their holdings were big, medium or small and from them the second stage sample of families was selected—12½ per cent from among big and 50 per cent from among medium farmers. All the small farmers (280) in the selected villages were studied. The total families in the sample were 597.

'Co-operative Farming in Gujarat' studied all the 83 active co-operative farming societies in Gujarat. For intensive study, 24 societies were purposively selected but a sample of 5 per cent of members and about one-third of this number from among non-members were selected by random sample method. The study of 'Capital Formation and Indebtedness' selected 4 villages out of 64 by random sample method but took a complete census of 227 families in these 4 villages.

Co-operation in Karjan covered all 89 societies but selected a sample of 10 per cent and 15 per cent of members for societies with membership of 50 or more and less than 50 respectively. A number equal to 5 per cent of total members of all societies was selected from among non-members. This selection of members and non-members, however, appears to be subjective. 'Conditions of Economic Progress of Farmers' is in fact a study of 36 typical cases. Hence these cases were selected purposively.

It will be easily noticed that for each of these studies a different plan of selection of sample units was followed. However, none of these studies (including the study 'Problems of Small Farmers') has a rationale of its plan.

Findings

There is some continuity in the findings of these seemingly diverse studies. 'Co-operation in Kodinar' concluded that co-operation had by-passed the weaker sections of the community, which was confirmed by 'Co-operation in Karjan'. The 'Problem of Small Farmers' observed further that despite the enviable achievement of co-operation in the region, the weaker sections did become weaker and that was due to inherent defects in their economy such as factor imbalance, excess of certain assets and labour (in relation to land), uneconomic structure of assets and capital rationing. 'Conditions of Economic Progress of Farmers' concluded that both growing and declining families derived their strength or weakness from causes very much specific to their individual cases; their economy was so precariously organized that once one weakness inflicted their economy, it led to other weaknesses—a loss of bullock may lead to borrowing, which may lead to deterioration of production pattern and adaptability, and level of living. 'Capital Formation and Indebtedness' study observed that only one-fifth of the gross capital formation was contributed by the borrowings, the rest was 'internally' obtained, which revealed a condition of severe capital rationing (difficult to say of which type, subjective or objective) despite the low-interest ($6\frac{1}{4}$ per cent) loan policy of the co-operative society and extensively developed credit co-operation in the Kodinar taluka. The families studied used (apparently) 53 per cent of borrowings productively.

'Co-operative Farming in Gujarat' reached the conclusion that the societies experienced in general severe shortage of working capital. Though Government made liberal contributions to fixed capital, their help in regard to working capital was limited; nor did the credit co-operative societies extend financial facilities for borrowing. Inefficient management due to lack of technical and administrative experience to tackle the new problems of large organization was the major drawback which also contributed to failures. Only those societies (tenant-farming societies) which did not undertake farming directly proved financially successful in all years.

(ii) *Administration*

Two studies (i) 'A Study of Panchayats in Madras' done in 1947 and (ii) 'The Report on the Administrative Survey of the Surat District' done in 1957, belong to this field. Both these studies drew their information from the Government

records. The Study of Panchayats, in addition to tracing the history of this institution, examines its working in Madras State particularly regarding finance, carrying out of the allotted functions and State supervision and control.

The Administrative Survey of the Surat District purported to evaluate the working of the existing set-up of administration, official and non-official, and the procedure and practices followed at various levels. It also studied the working of local boards. The intensive survey was confined to two talukas, Navsari and Chikhli. The main approach of the study was to examine the work-load of executives and assistants' work at different points, from the village upward, in the channels of the communication. It also purported to study the routing of the channel itself and co-ordination between different channels of communications. The study was extended to cover various special agencies.

In conclusion, the Report mentions that apart from the measures regarding increased efficiency through improved flexibility of the administrative machinery, the administration should come closer to the 'administered'—the people—through (i) the study of their requirements and (ii) people's participation in the execution of the projects.

(iii) *Land Reforms*

Of the three studies in this field, a study on 'The Land Systems of Bihar' by Dr. Gyan Chand and another study of 'Land Problems of Gujarat' prepared by Shri C. D. Kavi, examined respectively the land revenue systems, tenures and methods of collection of rent, etc.

The Society also made an enquiry into the working of the Bombay Tenancy and Agricultural Lands Act 1948 (as amended upto 1953) in Gujarat (excluding the Baroda District). The major objective of the study was to examine the enforcement of the various provisions of the Act relating to the security of tenure, fixation of rent and purchase of tenancy land by the tenant. In addition, it attempted to study the impact of tenancy on resource utilization and investment.

Method

For the study of the working of the Bombay Tenancy Act, three-stage clustered sampling was adopted for the selection of the sample units. At the first stage, the talukas were divided into two groups: (i) Ryotwari and (ii) non-Ryotwari and a random sample of 9 talukas from each of the two groups was selected, thus in all 18 talukas from 9 districts were studied. Again a random sample of 52 villages was selected from these 18 talukas; from each village 25 per cent of tenants, 10 per cent of fields (survey and sub-survey numbers) were selected on a random sample basis. In all 770 tenants were studied.

Contents

Items included in the study of the working of the Bombay Tenancy Act related to land use, crops, farm equipment and investment, credit and debt, protected tenancy, modes of tenancy, tenancy practices, terms of lease, tenancy disputes, surrenders, ejections and land purchases.

The major findings of the study were: (i) the degree of success of the Act was not uniform and the tenurial history of the region had a major influence on it; (ii) the Act resulted immediately into large number of ejectments—27 per cent of tenants; (iii) 13 per cent of tenant-farmers were sub-tenants who were not covered by the Act; (iv) rent tended to decline after the enactment of the legislation; (v) there was low level of consciousness among tenants regarding their legal rights. The success of the Act was limited on the whole. On the other hand, tenancy had no perceptible influence on land use, crop pattern, equipment and investment pattern.

(iv) *Famine and Rainfall*

Two studies (i) 'Rainfall and Famine' done in 1955 by Dr. Harold H. Mann and (ii) 'A Statistical Study of the Rainfall Data' done in 1959, belong to this field. Both these studies are based on rainfall data collected from Government records. The first study covered a period of nearly 75 years (1865-1938). Rainfall data relating to the famine tracts comprising Poona, Ahmednagar, Sholapur and Bijapur districts were studied. This study was undertaken to verify two hypotheses. They were: "In the first place, there is an uneasy feeling that over large areas in India the portion of the rainfall which is useful for agricultural purposes is becoming more and more precarious. The second object, which is of special interest from an administrative point of view, is to determine whether any reasonably probable conclusion as to the likelihood of famine conditions in the later part of a season can be drawn from the course of the rain in the earlier part of the year". The second study undertaken by Sarvashri D. S. Ranga Rao and V. N. Panditrao of the Department of Agriculture, Bombay State, Poona, is essentially a continuation of the first study and covered a period of 25 years (1931-32 to 1955-56). The main objects of this study were similar to those of the earlier study.

Dr. Mann evolved concrete criteria for the standard assessment of the precipitation during a given period, a day or a month, which he employed to study the relationship between rainfall and production and which Sarvashri Ranga Rao and Panditrao used for the study of relationship between the rainfall in the earlier and the latter part of the season. Production data used are based on 'anna valuation' which is a subjective criterion for estimation.

Findings

In the case of both these studies, the statistical analyses of the rainfall data gave an indication of cyclical changes in the quantum of rainfall, but unfortunately, the cycles so disclosed were neither simple nor regular to be of much use for forecasting the probability of rainfall conditions during a particular cycle in future. Secondly, the studies revealed that the correlation between the agricultural success of a season and the amount of rainfall before the end of June was little. The general conclusion, so far as the possibility of forecasting the occurrence of a famine from the information regarding the early rainfall of the season is disappointing.

PROBLEMS FACED

Three types of problems were faced by the field studies undertaken by the Society: (i) heavy non-response, (ii) methodological, especially regarding sample selection, and (iii) organizational.

Non-response

We have already indicated non-response constituted a heavy percentage for Bhuvel (54 per cent) and Pimple Saudagar (38 per cent). Even for Bhadkad, non-response was not totally absent. Thus non-response was a major problem for village studies. The 'problem studies' do not seem to have experienced much of non-response. Thus it would seem that only the 'census' studies have to face the problem of non-response. There is a recalcitrant section in a community which cannot be convinced of the research purposes either by persuasion or local influence. In Bhuvel, the investigator couple lived in the village for more than a year and yet they could not win over the recalcitrants.

Methodological Problems

We can assume that we may not face the problem of non-response in a large measure once we move from 'census' to 'sample' studies. But then in the case of sample studies we face another big problem.

As observed earlier, all combinations of sample selections have been employed by the Society studies, for which no easy rationale can be provided. Combinations used are (i) sample of villages with 'census' of families, (ii) census of 'higher' units (co-operative societies) with family sample, (iii) village sample and family sample for some strata and census for the remaining strata, and (iv) a sample of higher units (co-operative societies) and sample of families.

A section of research workers in the field would claim that as villages are more unlike but families within a village are more homogeneous, a larger sample of villages but a smaller number of families from each village should be selected. A census of families does not give additional information proportionate to the additional effort spent. A large number of villages and few families from each village will no doubt add to the cost per family covered but in addition raise a difficult problem of contacting families spread over a much wider area.

Again if we believe with the research workers acquainted with the problem of methodology that villages are more unlike each other, does it follow that co-operative societies would be more unlike each other and if so, the extreme measure of census is the only satisfactory remedy for obtaining accurate information?

In fact, the problem of sample size at each stage—village and family—poses a big problem in absence of adequate preliminary information. To collect preliminary information adequate enough to choose the right size of sample will in the end prove more expensive than over-sampling itself. A clear guidance on this issue was not available, and we fear, after experience of several field studies, it is still not available.

Organizational Problems

Organisational problems in fact overlap the problems of non-response and methodological problems to some extent. An institution with permanent cadre of field workers stationed in villages would not have to face the problem of non-response to any large extent and would less expensively get the preliminary data to help determine the type of sampling and the size of the sample. Besides, they

will need much less detailed supervision and much less time will have to be spent on preliminary training of field cadre.

A permanent field cadre however would mean a continuity in field 'operations'. We run into the problem of organisational indivisibilities probably in its graver form. The size of the permanent cadre would dictate the maximum size of the field projects an institution can undertake.

To solve these organisational problems the Society tried (i) stationing the trained research investigator for a longer duration in one place, (ii) associating local investigators less trained but more confidence-inspiring, with outside investigators more trained but less confidence-inspiring. The first could not prevent non-response. The second was tried for a sample study (Problem of Small Farmers); it did not guarantee the accuracy of the information, accuracy expected for academic standards.

Even for sample studies, where the region to be covered was small, a local office was established to facilitate supervision and check but this was not possible when a wide area was to be covered. Many of the gaps in the information obtained are traced only at the headquarters, by then the investigators have already left the village. A re-visit to these families in addition to being expensive is irksome both to the respondent and to the investigator and no wonder this irksomeness is reflected in the degree of accuracy of data obtained for which there is no check.

We do not refer here to the problem of inaccuracy of data for which the investigator or the respondent is not at fault and which is inherent in the "survey" method as against accounting method. This defect could be remedied by repeated rounds at frequent interval. However, the work of even one interview for all the families in the 'census' or the 'sample' was so heavy for the organization that the repeated rounds were obviously out of question. But then the problem of inaccuracy of data obtained from interview remained unsolved.[3]

FUTURE PROGRAMME

It has already been pointed out earlier that research programmes depend to a large extent on the resources available. *Ad hoc* Government grants or gifts and donations from other sources to cover a specific research project create a difficult organizational problem. To set up an organization on a temporary basis makes recruitment difficult on scales of salary equivalent to jobs requiring same qualifications. To take up a research project under such circumstances becomes quite an enterprise for reasons unconnected with research. No research programme, in the absence of at least a nucleus of field and supervisory staff on permanent basis, can be framed with courage and confidence.

CONCLUDING REMARKS

The three major types of researches done or encouraged by the Society, *viz.*, (i) village studies, (ii) area studies and (iii) problem studies, pursued two major objectives: (*i*) understanding the economic organization at the micro level and

3. In fact, the interview method yields commendable results when non-quantitative information is to be collected.

(*ii*) studying the problems of institutions such as co-operative societies, etc., serving the economy with a view to helping solve these problems and improve the efficiency of these institutions. The research themes acquired variety toward the late fifties but the two objectives mentioned continued to be in foreground. Pursuing these two objectives has served an important purpose at the time when the economy was struggling to maintain its precarious equilibrium. The quantity of researches and the quality of their content were determined, mostly by resources—financial, technical and organizational. The methodological deficiencies are also to be viewed in this background of the available resources.

Since the Five-Year Plans were inaugurated, new challenges have been thrown up, methodologically more scientific researches and researches attempting to study the problems of an economy moving forward are required to be taken up. Research is now required to study the problems of changing pattern of response behaviour of the economic groups and units, problems of growth and adjustment of institutions, and economic organizations and the problems of developing the nation's wealth. The economy is moving so rapidly now that some of the results of the past research will be soon rendered obsolete if they are not already so.

To obtain results of enduring interest new research has to be taken up by organization which is preferably permanent, facilitating continuity of effort. Further, the new researches have to be organized attempts of a team of research workers. This can be achieved if certain institutions are developed as important research organizations devoted chiefly and continuously to research.

APPENDIX

INDIAN SOCIETY OF AGRICULTURAL ECONOMICS

LIST OF RESEARCH WORKS*

Type of Studies	Title	Author	Year of Publication	Language	
1. Village Studies :	(1) Bhuvel: Socio-Economic Survey of A Village.	Shri Vimal Shah and Smt. Sarla Shah	1949	English & Gujarati	
	(2) Bhadkad—Social and Economic Survey of a Village: A Comparative Study, 1915-1955.		1957	English & Gujarati (1958)	
	(3) Resurvey of a Deccan Village—Pimple Saudagar.	Shri P. D. Diskalkar	1960	English	
2. Area Studies :	(1) Rural Problems in Madras. (Prepared by the Government of Madras).	Shri S. Y. Krishnaswamy.	1947	English	
	(2) Rural Baroda. (Prepared by the Government of Baroda).		1949	English	
	(3) Economic and Social Survey of Mehsana District.		1954	English & Gujarati	
3. Problem Studies :					
(i) *Co-operation :*	(1) Co-operation in Kodinar.		1952	English	
	(2) Report on the Enquiries into Capital Formation and into Indebtedness of Persons engaged in Agriculture in Certain Regions of Kodinar Taluka.		1951	English	*The Indian Journal of Agricultural Economics*, Vol. VI, No. 2, August 1951.
	(3) Problems of Small Farmers—Report on an Enquiry into the Problems of Low-Income Farmers in Kodinar Taluka.	Dr. C. H. Shah	1958	English	
	(4) Conditions of Economic Progress of Farmers—An Analysis of Thirty-six Case Studies.	Dr. C. H. Shah	1960	English	
	(5) Co-operation in Karjan (A Report on the Working of the Co-operative Movement in Karjan Taluka).	Dr. M. B. Desai	1960	English	

(Contd.)

Type of Studies		Title	Author	Year of Publication	Language	
	(6)	Co-operative Farming in Gujarat. (A Study into the Working of the Co-operative Farming Societies in Gujarat). Prepared by the Gujarat Co-operative Farming Survey Committee, Ahmedabad.		1959	English	
	(7)	The Economics of Estate Farming.	Shri R. K. Hazari	1954	English	
(ii) *Administration:*	(1)	A Study of Panchayats in Madras.	Shri K. Jayaraman	1947	English	
	(2)	Report on the Administrative Survey of the Surat District.	Shri N. B. Desai	1958	English	
(iii) *Land Reforms :*	(1)	"Land System in Bihar."	Dr. Gyan Chand	1946	English	*The Indian Journal of Agricultural Economics*, Vol. I, No. 1, July 1946.
	(2)	"Land Problems of Gujarat" (in two parts).	Shri C. D. Kavi	1947-1948	English	*The Indian Journal of Agricultural Economics*, Vol. II, No. 1, April 1947 and Vol. III, No. 2, Sept. 1948.
	(3)	Report on an Enquiry into the Working of the Bombay Tenancy and Agricultural Lands Act, 1948 (as amended upto 1953) in Gujarat (excluding Baroda District).	Dr. M. B. Desai	1958	English	
(iv) *Famine & Rainfall:*	(1)	Rainfall and Famine. A Study of Rainfall in the Bombay Deccan, 1865-1938.	Dr. Harold H. Mann	1955	English	
	(2)	"A Statistical Study of the Rainfall Data at the Four District Headquarter Stations of the Former Bombay State during the period from 1931-32 to 1955-56.	Sarvashri D. S. Ranga Rao and V. N. Panditrao	1959	English	*The Indian Journal of Agricultural Economics*, Vol. XIV, No. 1, January-March 1959.
Total Number	20					

* This list excludes other research studies dealing with general surveys of Indian rural economy, Readings in Agricultural Economics and Seminar Studies.